



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/912,099 | 07/24/2001 | Zuoxing Yu | CSA 2 0145 | 5530 13 |

7590 10/03/2003
FAY, SHARPE, FAGAN, MINNICH & McKEE, LLP
Seventh Floor
1100 Superior Avenue
Cleveland, OH 44114-2518

| |
|----------|
| EXAMINER |
|----------|

AHMED, SHEEBA

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

1773

DATE MAILED: 10/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/912,099

Applicant(s)

YU ET AL.

Examiner

Sheeba Ahmed

Art Unit

1773

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Appeal Brief

1. In view of the arguments in the Appeal Brief filed on July 2, 2003 (Paper NO, 12), PROSECUTION IS HEREBY REOPENED. New grounds for rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 since this Office action is non-final;

or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2). **Claims 21-30 are now pending.**

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Art Unit: 1773

2. Claims 21 and 24-29 are rejected under 35 U.S.C. 102(e) as being anticipated by Honda et al. (US 6,110,546) as evidenced by Contemporary Polymer Chemistry, 2nd Edition, last paragraph of page 10.

Honda et al. disclose an automobile weather strip that includes a weather strip body formed from a rubber composition and a decorative layer comprising at least one thermoplastic elastomer directly adhered to the weather strip body (Column 1, lines 6-13). The rubber composition that forms the weather strip body comprises a rubber polymer such as an ethylene-alpha-olefin-non-conjugated diene copolymer (EODM) wherein the alpha-olefin maybe propylene (*in which case the EODM is EPDM*) (Column 3, lines 2-42). The decorative layer comprises a thermoplastic elastomer such as an olefin thermoplastic elastomer (TPO) or a styrene thermoplastic elastomer (TPS). The olefinic thermoplastic elastomer comprises an ethylene-alpha-olefin copolymer rubber wherein the alpha-olefin may be octene (Column 3, lines 60-68 and Column 4, lines 11-32). The ethylene-alpha-olefin copolymer rubber can have a partially-crosslinked structure wherein the crosslinking is achieved via the use of crosslinking agents (Column 4, lines 63-68 and Column 5, lines 1-5). The styrene thermoplastic elastomer used in the decorative layer comprises an olefin resin and a vinyl aromatic compound such as styrene (Column 5, lines 6-20). The Examples indicate that the decorative layer may have a thickness of 0.3mm. **The Examiner is taking the position that the partially-cross linked ethylene-alpha-olefin copolymer rubber disclosed by Honda et al. is the same as the at least partially cross linked thermoplastic ethylene-alpha-olefin copolymer given that once the thermoplastic ethylene-alpha-olefin**

copolymer of the instant invention is cross linked, it is no longer a thermoplastic and in fact is an elastomer given that elastomeric properties become more obvious once a thermoplastic is lightly cross linked (as evidenced by *Contemporary Polymer Chemistry, 2nd Edition, last paragraph of page 10*). With regards to the process limitations recited in claims 26 and 29, the Examiner would like to remind the Applicants that the determination of patentability for product claims containing process limitations is based on the product itself and not on the method of production. If the product is the same or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985) and also see MPEP 2113. In this case, the product (i.e., the composite material) is the same despite the process limitations of extruding the two layers together. All limitations of claims 21 and 24-29 are disclosed in the above reference.

Claim Rejections - 35 USC § 103

3. Claims 22, 23, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Honda et al. (US 6,110,546) (as evidenced by *Contemporary Polymer Chemistry, 2nd Edition, last paragraph of page 10*) in view of Scott et al. (US 3,654,155).

Honda et al. disclose an automobile weather strip that includes a weather strip body formed from a rubber composition and a decorative layer comprising at least one thermoplastic elastomer directly adhered to the weather strip body (Column 1, lines 6-

Art Unit: 1773

13). The rubber composition that forms the weather strip body comprises a rubber polymer such as an ethylene-alpha-olefin-non-conjugated diene copolymer (EODM) wherein the alpha-olefin maybe propylene (*in which case the EODM is EPDM*) (Column 3, lines 2-42). The decorative layer comprises a thermoplastic elastomer such as an olefin thermoplastic elastomer (TPO) or a styrene thermoplastic elastomer (TPS). The olefinic thermoplastic elastomer comprises an ethylene-alpha-olefin copolymer rubber wherein the alpha-olefin may be octene (Column 3, lines 60-68 and Column 4, lines 11-32). The ethylene-alpha-olefin copolymer rubber can have a partially-crosslinked structure wherein the crosslinking is achieved via the use of crosslinking agents (Column 4, lines 63-68 and Column 5, lines 1-5). The styrene thermoplastic elastomer used in the decorative layer comprises an olefin resin and a vinyl aromatic compound such as styrene (Column 5, lines 6-20). The Examples indicate that the decorative layer may have a thickness of 0.3mm. The Examiner is taking the position that the partially-cross linked ethylene-alpha-olefin copolymer rubber disclosed by Honda et al. is the same as the at least partially cross linked thermoplastic ethylene- alpha-olefin copolymer given that once the thermoplastic ethylene-alpha-olefin copolymer of the instant invention is cross linked, it is no longer a thermoplastic and in fact is an elastomer given that elastomeric properties become more obvious once a thermoplastic is lightly cross linked (*as evidenced by Contemporary Polymer Chemistry, 2nd Edition, last paragraph of page 10*).

Honda et al. state that the decorative layer may comprise an ethylene-octene copolymer which has been at least partially crosslinked but do not specifically state that

Art Unit: 1773

ethylene-octene copolymer rubber used in the decorative layer is crosslinked with a silane compound.

However, Scott et al. disclose the crosslinking of olefin copolymer using a silane compound such that the crosslinking may be carried out in two stages and yields a product that has extremely high resistance to stress cracking and could be employed in extruded articles (Column 1, lines 54-65 and Column 5, lines 14-26).

Accordingly, it would have been obvious to one having ordinary skill in the art to crosslink the ethylene-octene copolymer disclosed by Honda et al. with a silane compound given that Scott et al. specifically teach that doing so yields a product that has extremely high resistance to stress cracking and could be employed in extruded articles.

Response to Arguments

4. Applicant's arguments filed on July 2, 2003 (Paper No. 12) have been fully considered but are moot in view of the new ground(s) of rejection. However, the Examiner will address these arguments as they apply to the new grounds of rejection.

Applicants state that the decorative layer of Honda is a two-phase thermoplastic elastomer blend of an olefinic resin and ***an elastomer rubber*** whereas the decorative layer of the present invention is a single-phase, ***crosslinkable thermoplastic copolymer to which silane groups have been grafted to effect crosslinking in the presence of water***. Applicants' further state that it is clear from Honda that only the rubber-phase is crosslinked. Specifically, the Applicants take the position that the

Art Unit: 1773

Examiner is missing the fundamental distinction between the crosslinked ethylene-alpha-olefin copolymer rubber of Honda and the crosslinkable thermoplastic of the present invention.

First, the Examiner would like to point out that the claimed invention is simply directed to **a *partially crosslinked thermoplastic decorative layer*** wherein the thermoplastic is selected from a crosslinkable ethylene-alpha-olefin copolymer or a crosslinkable ethylene-styrene interpolymer. It appears that the limitations, i.e., a single-phase thermoplastic copolymer to which silane groups have been grafted to effect crosslinking in the presence of water, on which the Applicants are relying are not stated in the claims. Furthermore, the Examiner has taken the position that once the thermoplastic has been partially crosslinked, it is no longer a thermoplastic and hence the partially cross-linked ethylene-alpha-olefin of the claimed invention is equivalent to the crosslinked ethylene-alpha-olefin copolymer rubber of Honda et al.

Second, Honda et al. specifically disclose a decorative layer that comprises a thermoplastic elastomer such as an olefin thermoplastic elastomer(TPO) or a styrene thermoplastic elastomer (TPS). The TPO comprises an ethylene-alpha-olefin copolymer rubber wherein the ethylene-alpha-olefin copolymer rubber can have a partially-crosslinked structure.

Art Unit: 1773

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sheeba Ahmed whose telephone number is (703)305-0594. The examiner can normally be reached on Mondays and Thursdays from 8am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Thibodeau can be reached on (703)308-2367. The fax phone numbers for the organization where this application or proceeding is assigned are (703)305-5408 for regular communications and (703)305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)306-5665.



Sheeba Ahmed
September 15, 2003



Ramsey Zacharia
Primary Examiner
Tech Center 1700